

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 89-123

NPDES NO. CA 0029548

WASTE DISCHARGE REQUIREMENTS FOR:

Ms. MARGARET DeBARNARDI
883 BORREGAS AVENUE
SUNNYVALE, SANTA CLARA COUNTY.

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. Ms. Margaret DeBarnardi (hereinafter called the discharger) leased above mentioned real property to Wolverton Associates, Inc., to operate a retail gas station (Formally Wolco Gas Station). A leak from an underground storage tank in August, 1984, resulted in the pollution of soil and groundwater underneath the site. Wolverton Associates has since gone into bankruptcy and abandoned the site. Ms. DeBarnardi has been cooperating with the Board and is involved in site cleanup activities. By application dated October 13, 1986, the discharger has applied for issuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).
2. Site investigations show that the groundwater beneath the site has been polluted by floating gasoline, dissolved petroleum hydrocarbons, dissolved benzene, toluene, xylenes, and ethylbenzene. The pollution is the result of an unauthorized release of an unknown quantity of gasoline which was reported in August, 1984.
3. The discharger has been involved with soil and groundwater investigations at the site since August, 1984. Eight monitoring wells on-site and fifteen monitoring wells in adjacent area, have been installed to determine the extent of groundwater pollution. Groundwater monitoring data had indicated that 0.13 inch thick free product floats on the groundwater table at one of the on-site monitoring wells. Data also indicated that a dissolved product plume extends laterally at least 450 feet north east from the source.
4. Since December 1987, the discharger has been pumping and treating polluted groundwater, and operating an on-site recovery system. Based on the design criteria of the treatment system and the data collected during the

groundwater investigation, it is not clear that the present cleanup system will be able recover all the free product or contain and remediate all polluted groundwater; however, it was important to initiate cleanup at the site. The performance of the cleanup system will be evaluated to determine if any additional extraction wells or treatment will be required.

5. Under average operating conditions, designated waste 001, consist of a flow of 4,320 gallons per day (gpd). The polluted groundwater is pumped from infiltration trench and treated using an air-stripping system combined with dual activated carbon adsorbers. The treated groundwater is discharged to a storm drain tributary to the Moffett Channel and to South San Francisco Bay.
6. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives for South San Francisco Bay, and contiguous surface and ground water.
7. The existing and potential beneficial uses of South San Francisco Bay are:
 - Navigation
 - Commercial and Sport Fishing
 - Preservation of Rare and Endangered Species
 - Fish Spawning and Migration
 - Wildlife Habitat
 - Shellfish Harvesting
 - Estuarine Habitat
 - Contact and Non-contact Water Recreation
 - Industrial Service Supply
8. The Basin Plan prohibits discharge of wastewater which has particular characteristics of concern to beneficial uses at any point in San Francisco Bay south of the Dumbarton Bridge and at any point where the wastewater does not receive a minimum initial dilution ratio of at least 10:1 or into any nontidal water, or any immediate tributary thereof.
9. The Basin Plan allows for exceptions to the prohibitions referred to in Finding 8 above when it can be demonstrated that a net environmental benefit can be derived as a result of the discharge.
10. Exceptions to the prohibitions referred to in Finding 8 are warranted because the discharge is an integral part of a program to cleanup polluted groundwater and thereby produce an environmental benefit, and because receiving water concentrations are expected to be below levels that would effect beneficial uses. Should studies indicate chronic effects, not currently anticipated, the Board will review

the requirements of this order based upon Receiving Water Limitation.

11. The Basin Plan prohibits discharge of "all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin." The discharger's groundwater extraction and treatment system and associated operation, maintenance, and monitoring plan constitutes an acceptable control program for minimizing the discharge of toxicants to waters of the State.
12. Effluent limitations of this Order are based on the Basin Plan, State plans and policies, U.S. Environmental Protection Agency guidance, and best engineering judgment as to best available technology economically achievable.
13. Effluent limitations and toxic effluent standards established pursuant to Sections 301, 304 and 307 of the Clean Water Act, and amendments thereto are applicable to the discharge.
14. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
15. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
16. The Board, in a public hearing, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. The discharge of waste or hazardous materials in a manner which will degrade the water quality or adversely affect beneficial uses of the groundwater of the State is prohibited.
2. The discharge shall be limited to treated groundwater and storm water run-off which meet the effluent limitations.

B. Effluent Limitations

1. The effluent at the point of discharge to the storm drain shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Unit</u>	<u>Instantaneous</u>	<u>Maximum</u>
Benzene	ug/l	5.0	
Toluene	ug/l	5.0	
Xylenes	ug/l	5.0	
Ethylbenzene	ug/l	5.0	
Total Petroleum Hydrocarbons as Gasoline	ug/l	50.0	

2. The pH of the discharge shall not exceed 8.5 nor be less than 6.5
3. The effluent water shall be sampled and tested for toxic heavy metals. If toxic heavy metals are detected in the effluent then the Board will establish effluent limitations for heavy metals consistent with the basin plan (Table IV-1).
4. In any representative set of samples, the discharge of waste shall meet the following limit of quality:

TOXICITY:

The survival of test fishes in 96-hour static renewal bioassays of the discharge shall be a median of 90% survival and a percentile value of not less than 70% survival.

Compliance of the bioassays shall be performed using two test fish species in parallel tests. One shall be three-spined stickleback, and the other shall be either rainbow trout or fathhead minnow.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;

- c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
- a. Dissolved oxygen: 7.0 mg/l minimum. The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause lesser concentration(s) than specified above, the discharge shall not cause further reduction in the concentration of dissolved oxygen.
 - b. pH The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.
 - c. Un-ionized ammonia: 0.025 mg/l as N Annual Median
0.4 mg/l as N Maximum at any time
3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.


D. Provisions

1. The discharger shall comply with all sections of this Order immediately upon adoption.
2. The discharger shall comply with attached Self-Monitoring Program as adopted by the Board and as may be amended by the Executive Officer.
3. The discharger shall also notify the Regional Board if any activity has occurred or will occur which would result in the discharge, on a frequent or routine basis, of any toxic pollutant which is not limited by this Order.
4. This permit may be modified prior to the expiration date to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this order.
5. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986 except Items B.2, B.3 and C.11.
6. This Order expires July 19, 1994, and the discharger must file a report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
7. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act, or amendments thereto, and shall become effective at the end of ten days from date of hearing provided the Regional Administrator, U.S. Environmental Protection Agency, has no objection.

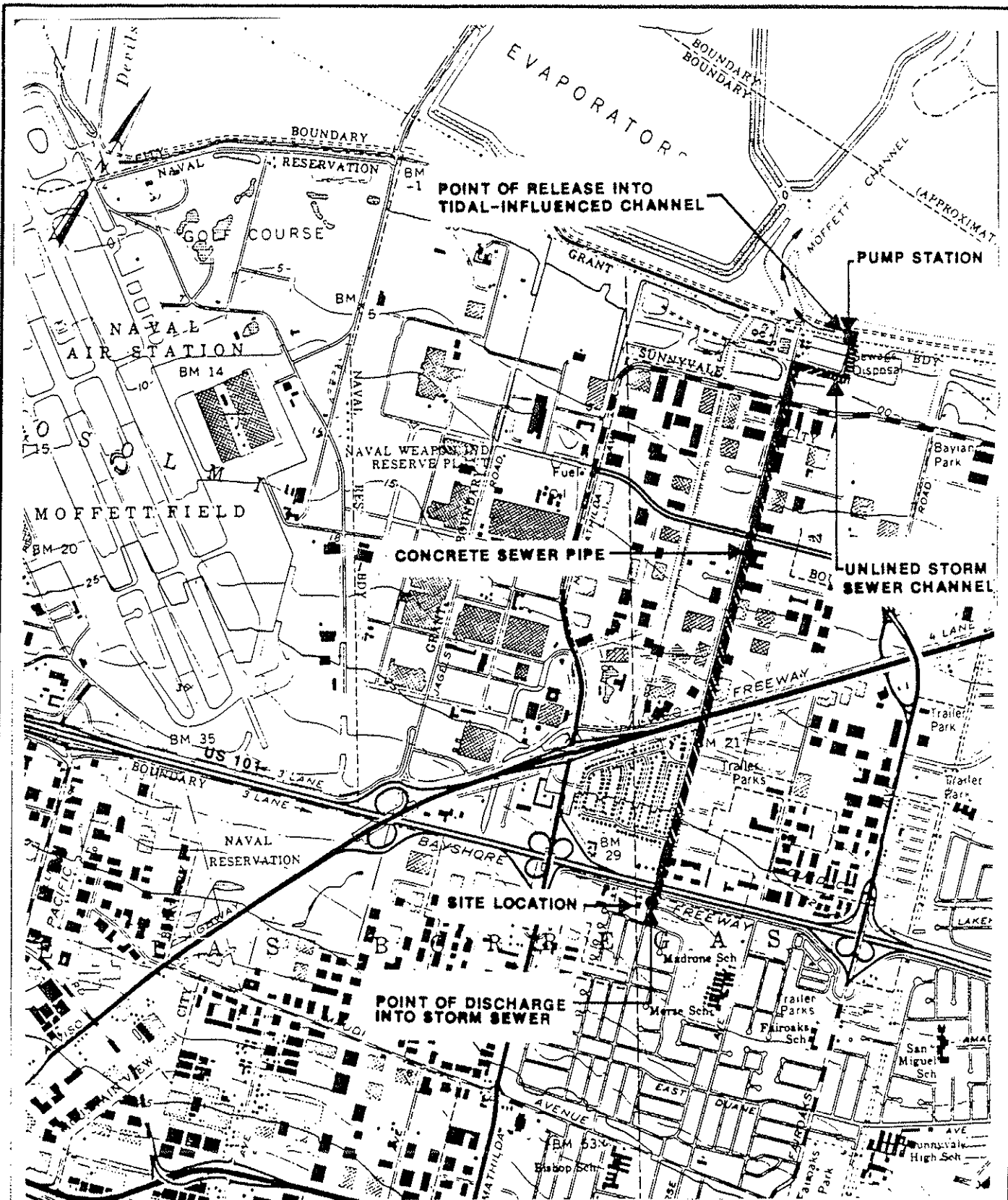
I, Steven R. Ritchie, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on July 19, 1989.

Attachments:

Standard Provisions & Reporting
Requirements, December 1986.
Self-Monitoring Program
Site Map



STEVEN R. RITCHIE
EXECUTIVE OFFICER



STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SITE LOCATION

WOLCO GAS STATION
883 Borregas Avenue
Sunnyvale, Santa Clara County

DRAWN BY: VP DATE: 5/30/89 DRWG. NO.

Part B

SELF MONITORING PROGRAM FOR Ms. MARGARET DeBARNARDI
883 BORREGAS AVENUE, SUNNYVALE, CA 95134.

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station

I-1 At a point in the groundwater
 extraction/treatment system immediately prior
 to any treatment.

B. EFFLUENT

E-1 At a point in the groundwater
 extraction/treatment system immediately
 following treatment at a point before
 discharging into the storm drain leading into
 Moffett Channel.

C. RECEIVING WATERS

Station

C-1 At a point of discharge into Moffett Channel.

II. MISCELLANEOUS REPORTING

At least 30 days before any chemicals are utilized in or added to the treatment system, they shall be reported to the Executive Officer for review and approval.

III. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be that given in Table 1 (attached).

IV. SHUT DOWN REPORTING

A report should be submitted within 15 days of the date of any violation to the RWQCB that describes the violation, the estimated volume of water that was discharged in violation, what corrective action was taken or is planned, and how the discharger will/has verified that future dischargers will not impact or threaten to impact waters of the state.

The discharge must be stopped or routed to a holding tank (not discharged into the storm drain) immediately upon

laboratory verification that the discharge is in violation of the discharge limitations established in the NPDES permit.

V. SELF-MONITORING REPORTS

Written reports shall be filed regularly for each calendar month (unless specified otherwise) and filed no later than the fifteenth day of the following month. The reports shall be comprised of the following:

a. Letter of Transmittal:

A letter transmitting self-monitoring reports should accompany each report. Such a letter shall include:

- 1) Identification of all violations of waste discharge requirements found during the reporting period,
- 2) Details of the magnitude, frequency, and dates of all violations,
- 3) The cause of the violations, and
- 4) Discussions of the corrective actions taken or planned and the time schedule for completion. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory.

Monitoring reports and the letter transmitting reports shall be signed by a principal executive officer or ranking elected official of the discharger, or by a duly authorized representative of that person. The letter shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and behalf, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

b. Compliance Evaluation Summary

Each report shall be accompanied by a compliance evaluation summary sheet prepared by the discharger. The report format will be prepared similar to the example shown in APPENDIX A (attached). The discharger will prepare the format substituting for the example parameters, those parameters and requirements limits for influent, effluent and receiving water constituents specified in the permit.

c. Map or Aerial Photograph

A map or aerial photograph shall accompany the report showing sampling and observation station locations.

d. Result of analysis and Observations

Each report shall include tabulations of the results from each required analysis specified in Part B by date, time, type of sample, detection limit and station, signed by the laboratory director. The report format will be prepared similar to the examples shown in APPENDIX B, substituting those parameters given in the examples.

- 1) If the permittee monitors any pollutant more frequently than required by this permit using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Self-Monitoring Report.
- 2) Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- 3) The report shall also identify a table identifying by method number of the analytical procedures used for analysis. Any special methods shall be identified and should have prior approval of the Board's Executive Officer.
- 4) Lab results shall be copied and submitted as an appendix to the regular report.

e. Influent and Effluent Data Summary

Summary tabulations of the data to include for each constituent total number of analysis, maximum, minimum, and average values for each period. The report format

will be the NPDES Discharge Monitoring Report, EPA Form 3320-1. Flow data shall be included.

- 1) The original is to be submitted to EPA:

Regional Administrator
U.S. Environmental Protection Agency
Attention: Enforcement Division (W-5)
215 Fremont Street
San Francisco, CA 94105

- 2) with a copy to the Regional Board:

Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6000
Oakland, CA 94607

f. List of Approved Analyses

- 1) Listing of analyses for which the discharger is approved by the State Department of Health Services.
- 2) List of analyses for which the discharger by another approved laboratory (and copies of the reports signed by the laboratory director of that laboratory shall also be submitted as part of the report).
- 3) List of "waived" analyses, as approved by the Executive Officer.

g. Flow Data

- 1) The tabulation pursuant to Section F-2.

VI. QUARTERLY REPORTING

The discharger shall submit detailed Quarterly Progress Reports summarizing work accomplished toward groundwater contamination cleanup. The quarterly reports shall be received by the Regional Board by the end of the second week following each quarter. The reports shall include:

- a) Assessment as to whether remediation action taken to date has been adequate and its degree of effectiveness.
- b) Groundwater levels, and chemical analysis results presented in tabulated form for all on-site and off-site monitoring wells,

- c) Updated potentiometric surface maps for all water bearing zones, and any updated maps and cross-sections depicting isoconcentration and isothickness contours.
- d) Description and schedule of any additional site work and/or modifications anticipated for the coming quarter.

VII. ANNUAL REPORTING

By January 30 of each year, the discharger shall submit in place of the end of the year quarterly report, an annual report to the Regional Board covering the previous calendar year. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the report shall contain a comprehensive discussion of general performance of the groundwater treatment system. The report shall also contain discussion of the new activities or modification planned for the next year.

VIII. MODIFICATIONS TO PART A

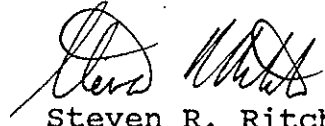
All items of Self Monitoring Part A, dated December 1986 and as modified January 1987 shall be complied with except for the following modifications:

- A. Delete Sections D.2.d, D.2.g, E.1.e, E.4, G.4, and G.5.
- B. Add the following as Section F.4:
 - 4. A tabulation shall be maintained showing the total quarterly volume of spent activated carbon (in cubic feet) from each treatment unit and the disposal site location.
- C. Information requested under Section G.4.e shall be prepared in format similar to EPA Form 3320-1 and shall be submitted only to the Regional Board.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

- 1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharger requirements established in Regional Board Order No. 89-123.
- 2. Was adopted by the Board on July 19, 1989.
- 3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request

from the discharger, and revisions will be order by the
Executive Officer or Regional Board.



Steven R. Ritchie
Executive Officer

Attachments: Table 1
Appendices: A-E

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

SAMPLING STATION >>>>	I-1	E-1	C-1	
TYPE OF SAMPLE	GRAB	GRAB	GRAB	
Flow Rate (gal/day)		C		
pH (units)	M	M	A/V	
Temperature (deg. C)	M	M	A/V	
Dissolved Oxygen (mg/l and % saturation)	M	M	A/V	
Electrical Conductivity	M	M	A/V	
Priority Pollutant Metals	Q/A	Q/A	A/V	
EPA 602 for: Benzene Toluene Total Xylenes Ethylbenzene	M	M	A/V	
Modified EPA 8015 for Petroleum Hydrocarbons as gasoline	M	M	A/V	
EPA 601*	BA	BA	V	
Toxicity		Q/A		

LEGEND FOR TABLE 1

C = continuous flow readings: report average daily flow based on weekly total

M = once each month

Q/A = quarterly for 1 year; annually thereafter

V = sampling should be performed whenever E-1 is in violation

M = Monthly.

BA = biannually during first year; discontinued thereafter.

A = annually

* The ten largest peaks in the chromatogram, other than the priority pollutants listed in the method, shall be identified.